



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,994	11/16/2000	James Keddie	MBI-0022	7536

47334 7590 07/14/2005

MENDEL 2 C/O MOFO SF  
425 MARKET STREET  
SAN FRANCISCO, CA 94105

EXAMINER

KRUSE, DAVID H

ART UNIT PAPER NUMBER

1638

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/713,994

Applicant(s)

KEDDIE ET AL.

Examiner

David H. Kruse

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/30/2002; 3/31/2003; & 4/20/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8,13,14,25 and 27 is/are pending in the application.
- 4a) Of the above claim(s) 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8,13,14 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/3/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **STATUS OF THE APPLICATION**

1. Applicant's petition for withdrawal of the Abandonment mailed 13 April 2004 was been granted in the correspondence from the Office of Petitions mailed 11 March 2005.
2. This Office action is in response to the Amendment and Remarks filed on 30 December 2002.
3. The formal drawings filed on 30 December 2002 are acceptable to the Examiner.
4. The IDS filed on 3 April 2003 has been considered, a signed copy is attached hereto.
5. Applicant's submission of Appendix A, on CD, was been received in the Office on 20 April 2005.
6. The instant application is now in compliance with the Sequence Rules.
7. Those rejections not specifically addressed in this Office action are withdrawn in view of Applicant's amendments to the claims.
8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Election/Restrictions***

9. Claim 27 remains withdrawn from further consideration pursuant to 37 CFR § 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 16 May 2002.
10. This application contains claim 27 drawn to an invention nonelected with traverse in the reply filed on 16 May 2002. A complete reply to the final rejection must include

Art Unit: 1638

cancellation of nonelected claims or other appropriate action (37 CFR § 1.144). See MPEP § 821.01.

11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR § 1.48(b) and by the fee required under 37 CFR § 1.17(i).

#### ***Specification***

12. The abstract of the disclosure is objected to because it is not directed to the invention of the claims. The following abstract is suggested: -- The invention is directed to isolated nucleic acids encoding a plant transcription factor that regulates resistance to fungal pathogens, methods of using the isolated nucleic acids, and plants transformed with the nucleic acids. --. Correction is required. See MPEP § 608.01(b).

13. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

#### ***Claim Objections***

14. Claims 3 and 4 are objected to because of the following informalities: At claim 3, the ":" after "of" at line 2 is an improper punctuation within the claim and should be deleted. At claim 4(c), "NO: 15" should be -- SEQ ID NO: 15 --. Appropriate correction is required.

15. Claim 14 is objected to under 37 CFR § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The instant claim fails to further limit the method of claim 13, specifically the polynucleotide of claim 4, already recited in claim 13.

***Claim Rejections - 35 USC § 112***

16. Claims 1-8, 13, 14 and 25 remain rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is repeated for the reason of record as set forth in the last Office action mailed 30 July 2002.

Applicant's arguments filed 30 December 2002 have been fully considered but they are not persuasive.

Claims 1 and 4 remain rejected as being indefinite for the recitation of the limitation "hybridizes under stringent conditions". Applicants argue that the most critical aspects of hybridization and wash steps are ionic strength and temperature parameters, and that given the range of conditions an experimenter may wish to impose on a hybridization protocol (within the ranges disclosed in the specification), in each case hybridizing polynucleotide molecules reach full equilibration in the stringent chemical environment and temperature in a relatively short time, and disassociation and elution of molecular species requires even less. Applicants argue that the skilled artisan knows that these periods are generally on the order of hours for the former and minutes for the

Art Unit: 1638

latter and that for all of these reasons it would be trivial for a given experimenter skilled in the art of routine hybridization studies to determine an appropriate time period for successful hybridization and washing given the conditions provided in the specification, particularly given the reference provided and the time parameters taught therein (page 9, 3<sup>rd</sup> paragraph of the Remarks). This argument is not found to be persuasive because it is the stringency of the hybridization conditions that defines the metes and bounds of the claimed isolated or recombinant polynucleotide introduced into the transgenic plant of claim 1 or encompassed by claim 4. Without knowing the specific conditions, one of skill in the art would not be able to recognize the metes and bounds of the claimed invention.

Claim 3 is indefinite. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 3

Art Unit: 1638

recites the broad recitation "rosaceous fruits and vegetable brassicas", and the claim also recites "blackberry...strawberry, raspberry,...cauliflower" which is the narrower statement of the range/limitation.

Claims 1 and 4 are indefinite. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1 and 4 recite the broad recitation "(d) a nucleotide sequence comprising silent substitutions in the nucleotide sequence of (c);", and the claims also recite "(c) a nucleotide sequence comprising SEQ ID NO: 15;" which is the narrower statement of the range/limitation.

Those claims not specifically addressed in this rejection are also indefinite because they do not obviate the indefiniteness of the claim(s) they are dependent upon.

17. Claims 1-8, 13, 14 and 25 remain rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is repeated for the reason of record as set forth in the last Office action mailed 30 July 2002. Applicant's arguments filed 30 December 2002 have been fully considered but they are not persuasive.

The following rejection is made to the extent the instant claims are directed to a plant transformed with or an isolated polynucleotide comprising a nucleotide sequence "comprising a conservatively substituted variant of the polypeptide of SEQ ID NO: 110" or "which hybridizes under stringent conditions".

Applicant argues that the support for the unique identifying features of the polynucleotide of SEQ ID NO: 14 is to be found in the specification (page 14, 4<sup>th</sup> paragraph of the Remarks). This argument is not found to be persuasive because Applicant does not describe the genus of isolated polynucleotides having a nucleotide sequence encoding a polypeptide comprising a conservatively substituted variant of the polypeptide of SEQ ID NO: 110, or which hybridizes under stringent conditions to such a polynucleotide as broadly claimed.

18. Claims 1-8, 13, 14 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one



skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is modified from the rejection of record as set forth in the last Office action mailed 30 July 2002. Applicant's arguments filed 30 December 2002 have been fully considered but they are not persuasive.

Applicant claims an isolated or recombinant polynucleotide comprising a nucleotide sequence encoding a polypeptide comprising the sequence of SEQ ID NO: 110, comprising a conservative substituted variant of said polypeptide, a nucleotide sequence comprising silent substitutions of said nucleotide sequence, and a nucleotide sequence that hybridizes under stringent conditions thereto. Applicant also claims transgenic plants comprising a recombinant polynucleotide comprising said nucleotide sequence, a cloning or expression vector comprising said polynucleotide, and a method of producing a plant having a modified characteristic using said polynucleotide.

Applicant teaches a transgenic *Arabidopsis thaliana* "knockout" plant in Figure 2 and Appendix A, having increased susceptibility to *Fusarium*.

Applicant does not teach other polynucleotides comprising a conservative substituted variant of the polypeptide of SEQ ID NO: 110, or a nucleotide sequence that hybridizes under stringent conditions thereto. Applicant does not teach any unique identifying features of a polynucleotide having the nucleotide sequence of SEQ ID NO: 15, what type of polypeptide is encoded by a polynucleotide having the nucleotide sequence of SEQ ID NO: 15, other than it may be a transcription factor, or what "modified trait" a plant comprising a recombinant polypeptide comprising a conservative substituted variant of said polypeptide, would exhibit compared to a wild type plant. In

addition, at claim 26, Applicant does not teach altered or altering expression levels of an isolated or recombinant polypeptide in a plant by methods other than overexpression or suppression using a polynucleotide having the sequence of SEQ ID NO: 15.

The teachings of *in re Wands* can be found in a previous Office action.

Applicant does not teach a transgenic plant transformed with a polynucleotide encoding the polypeptide of SEQ ID NO: 110. Applicant teaches a knock out mutant *Arabidopsis thaliana* plant which has been disrupted in the gene encoding the polypeptide taught in SEQ ID NO: 110 in Appendix A. Larkin *et al* (1994, The Plant Cell 6:1065-1076) teach the unpredictability of transforming a plant to produce the opposite phenotype as the mutant-gene phenotype. Larkin *et al* teach that *GLABROUS1* (*GL1*) mutant plants have a reduced number of trichomes. Over-expressing *GL1* in *Arabidopsis* does not produce plants with an increased number of trichomes compared to wild-type plants (page 1072, right column, 1<sup>st</sup> paragraph). Therefore, just because the knockout mutant mutants exhibit an increased susceptibility to *Fusarium*, does not mean that over-expressing polynucleotide encoding the polypeptide of SEQ ID NO: 110 will automatically produce plants with an increased tolerance to *Fusarium*. Because Applicant does not specifically teach what the specific function of a polynucleotide encoding the polypeptide of SEQ ID NO: 110 is, Applicant has provided no guidance to one of skill in the art how to make and use conservatively substituted variants of the polypeptide of SEQ ID NO: 110, or nucleotide sequences that hybridize under stringent conditions to a polynucleotide comprising the nucleotide sequence of SEQ ID NO: 15. Applicant does not teach how to use the claimed isolated polynucleotide or transgenic

Art Unit: 1638

plant in the instant specification without undue trial and error experimentation by one of skill in the art. Applicant provides no evidence that even if the polypeptide of SEQ ID NO: 110 does encode a plant transcription factor, that it would have any use in a transgenic plant other than *Arabidopsis thaliana*.

Applicants argue that one of skill in the art would have a reasonable expectation that a transgenic plant over-expressing SEQ ID NO: 15 (G896) would have increased tolerance to infection by *Fusarium* (page 14, 5<sup>th</sup> paragraph of the Remarks). This argument is not found to be persuasive for the reasons given above.

### ***Claim Rejections - 35 USC § 102***

19. Claims 1-8 and 25 remain rejected under 35 U.S.C. § 102(e) as being anticipated by Thomashow *et al* (U.S. Patent 6,417,428, filed 23 November 1998). This rejection is repeated for the reason of record as set forth in the last Office action mailed 30 July 2002. Applicant's arguments filed 30 December 2002 have been fully considered but they are not persuasive.

Applicants' response is directed to the amendments to claims 1 and 4 (page 16 of the Remarks). This response is not persuasive because read broadly, the instant claims are anticipated by the disclosure of Thomashow *et al* as discussed in the previous Office action.

### ***Double Patenting***

20. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. § 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re*

Art Unit: 1638

*Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. § 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. § 101.

21. Applicant is advised that should claim 1 be found allowable, claim 8 will be objected to under 37 CFR § 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

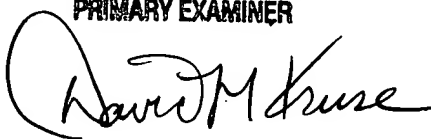
***Conclusion***

- 22. Claims 13 and 14 are free of the prior art as amended.
- 23. No claims are allowed.
- 24. This Office action is non-final in view of the new grounds of rejection put forth.
- 25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Kruse, Ph.D. whose telephone number is (571) 272-0799. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached at (571) 272-0745. The fax telephone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (571) 272-0547.

DAVID H. KRUSE, PH.D.  
PRIMARY EXAMINER

A handwritten signature in black ink that reads "David H. Kruse". The signature is written in a cursive style with a large, looping initial "D".

David H. Kruse, Ph.D.  
5 July 2005

Art Unit: 1638

26. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.